

Features:

- 184-channel u-blox F9 engine GPS L1C/A L5, GLO L10F, GAL E1B/C E5a, BDS B11 B2a, QZSS L1C/A L1S L5, SBAS L1C/A NavIC L5
- On-board low noise 3.3V voltage regulator
- USB C interface
- SMA antenna connectors
- Power LED
- Time pulse LED
- RTK status LED
- Support active antenna
- u-center ublox Evaluation Software
- Extensive visualization and evaluation features
- Backup supercapacitor
- Dimensions without connectors: 40x30x18 mm
- Weight: 43 gr.
- Fully assembled and ready to use

Reference: ELT0191



GNSS FEATURES

Receiver type	184-channel u-blox F9 engine Beidou, Galileo, GLONASS, GPS/QZSS
GNSS platform	Concurrent GNSS
GNSS bands	GPS L1C/A L5, GLO L10F, GAL E1B/C E5b, BDS B11 B2I, QZSS L1C/A L1S L5, SBAS L1C/A NavIC L5
Oscillators	TCXO

PERFORMANCE

Horizontal pos. accuracy			
PVT	1.5 m CEP		
SBAS	1.0 m CEP		
RTK	0.01 m + 1 ppm CEP		
SPARTN	< 0.06 m CEP (GPS+GLO+GAL)		
CLAS	0.04 m CEP (GPS+GLO+GAL)		
Vertical pos. accuracy			
PVT	2.0 m R50		
SBAS	1.5 m R50		
RTK	0.01 m + 1 ppm R50		
SPARTN	< 0.12 m R50		
CLAS	0.08 m R50		
Convergence time			
RTK	< 10 s		
SPARTN	< 45 s		
CLAS	< 70 s		
Acquisition			
	Cold start	Hot/Aided start	Nav. update rate
			RTK PVT RAW
GPS+GLO+GAL+BDS	25 s	2 s	7 Hz 9 Hz 15 Hz
GPS+BDS+GAL	25 s	2 s	10 Hz 10 Hz 18 Hz
GPS+GAL	30 s	2 s	15 Hz 20 Hz 25 Hz
GPS+GLO	25 s	2 s	14 Hz 20 Hz 25 Hz
GPS+BDS	30 s	2 s	13 Hz 16 Hz 25 Hz
GPS	30 s	2 s	20 Hz 25 Hz 25 Hz
Velocity accuracy	0.05 m/s		
Dynamic heading accuracy	0.3 deg		
Sensitivity:			
Tracking and Navigation	-167 dBm		
Reacquisition	-160 dBm		
Cold start	-148 dBm		
Hot start	-157 dBm		

OTHER FEATURES

Anti-jamming	Active CW detection and removal
	Dual onboard band pass filter
Anti-spoofing	Advanced anti-spoofing algorithms
Security	Secure boot
	Secure firmware update
Memory	Flash
RAW data support	Carrier phase, code phase and pseudo-range, Doppler on all signals
Operating temperature	0 °C to +50 °C
Supply voltage	4.5 V to 5.5 V
Supply current	<130 mA (without external antenna)
External antenna requirements	Supply voltage 3.0 V
	Consumption current <50 mA